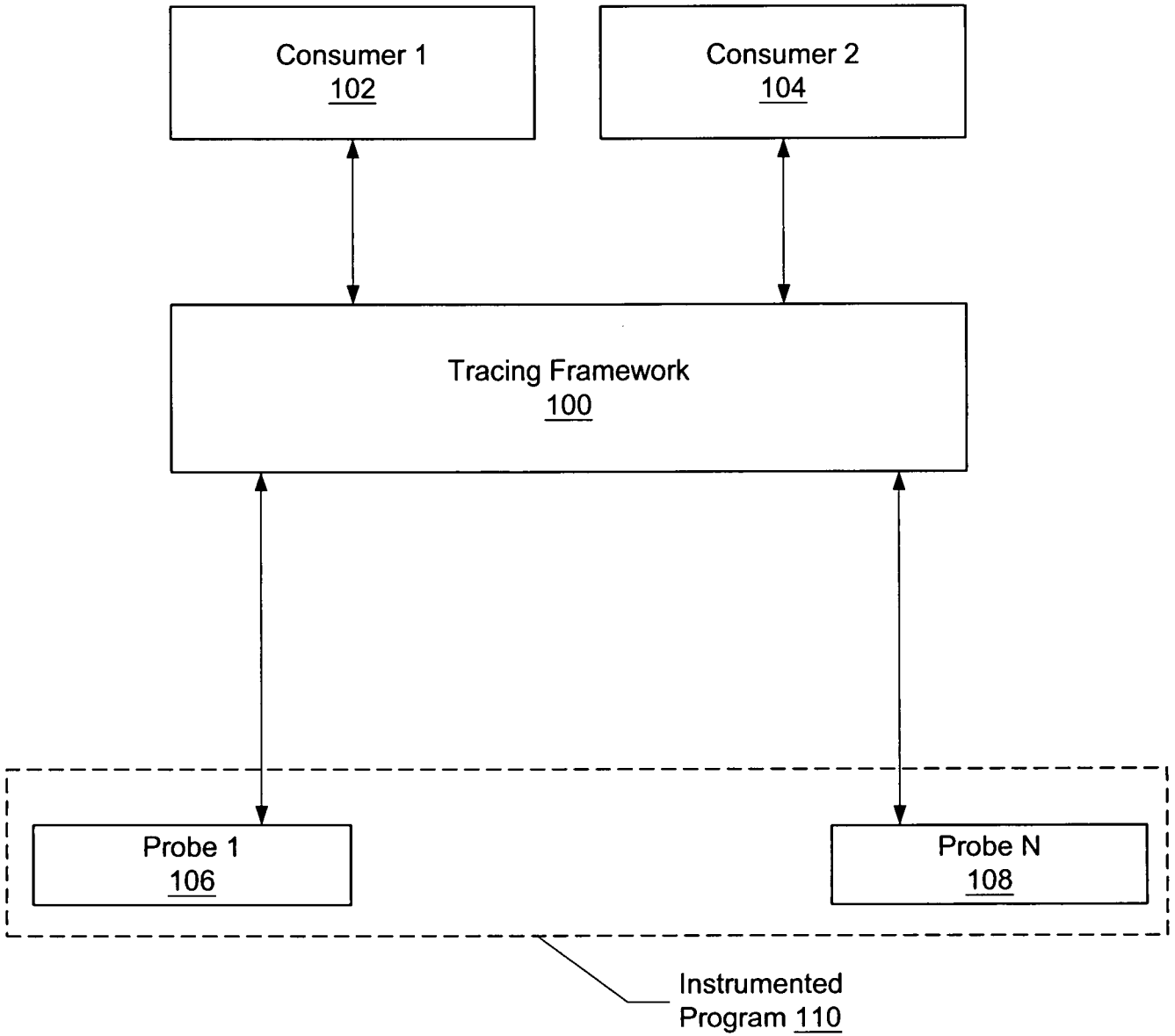
Consumer 1
102
Consumer 2
104
Tracing Framework
100
Probe 1
106
Probe N
108
Instrumented
Program 110

FIGURE 1

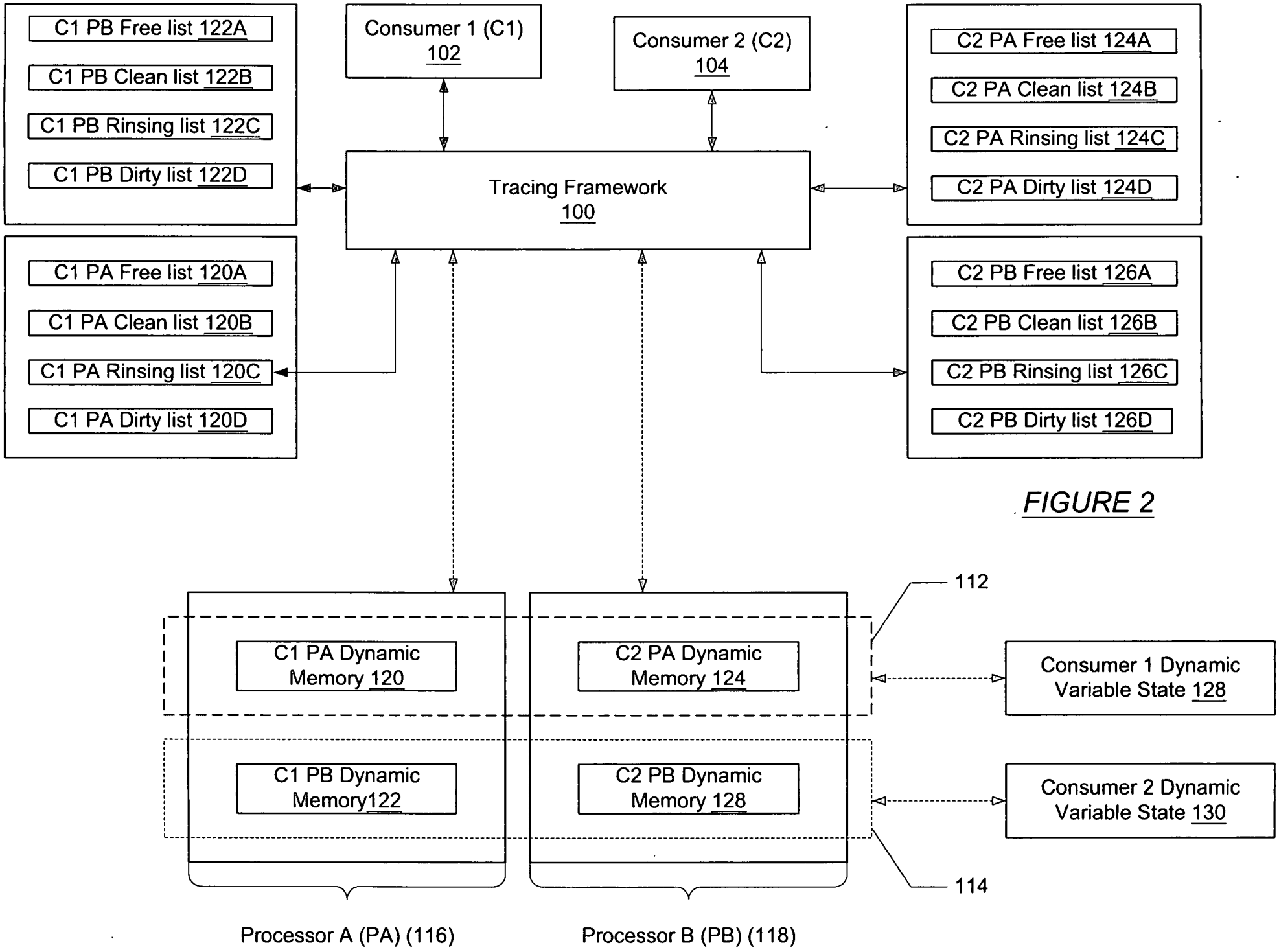
C1 PB Free list 122A
C1 PB Clean list 122B
C1 PB Rinsing list 122C
C1 PB Dirty list 122D
Consumer 1 (C1) 102
Consumer 2 (C2) 104
C2 PA Free list 124A
C2 PA Clean list 124B
C2 PA Rinsing list 124C
C2 PA Dirty list 124D
Tracing Framework 100
C1 PA Free list 120A
C1 PA Clean list 120B
C1 PA Rinsing list 120C
C1 PA Dirty list 120D
C2 PB Free list 126A
C2 PB Clean list 126B
C2 PB Rinsing list 126C
C2 PB Dirty list 126D
112
C1 PA Dynamic Memory 120
C2 PA Dynamic Memory 124
Consumer 1 Dynamic Variable State 128
C1 PB Dynamic Memory122
C2 PB Dynamic Memory 128
Consumer 2 Dynamic Variable State 130
114
Processor A (PA) (116)
Processor B (PB) (118)

FIGURE 2

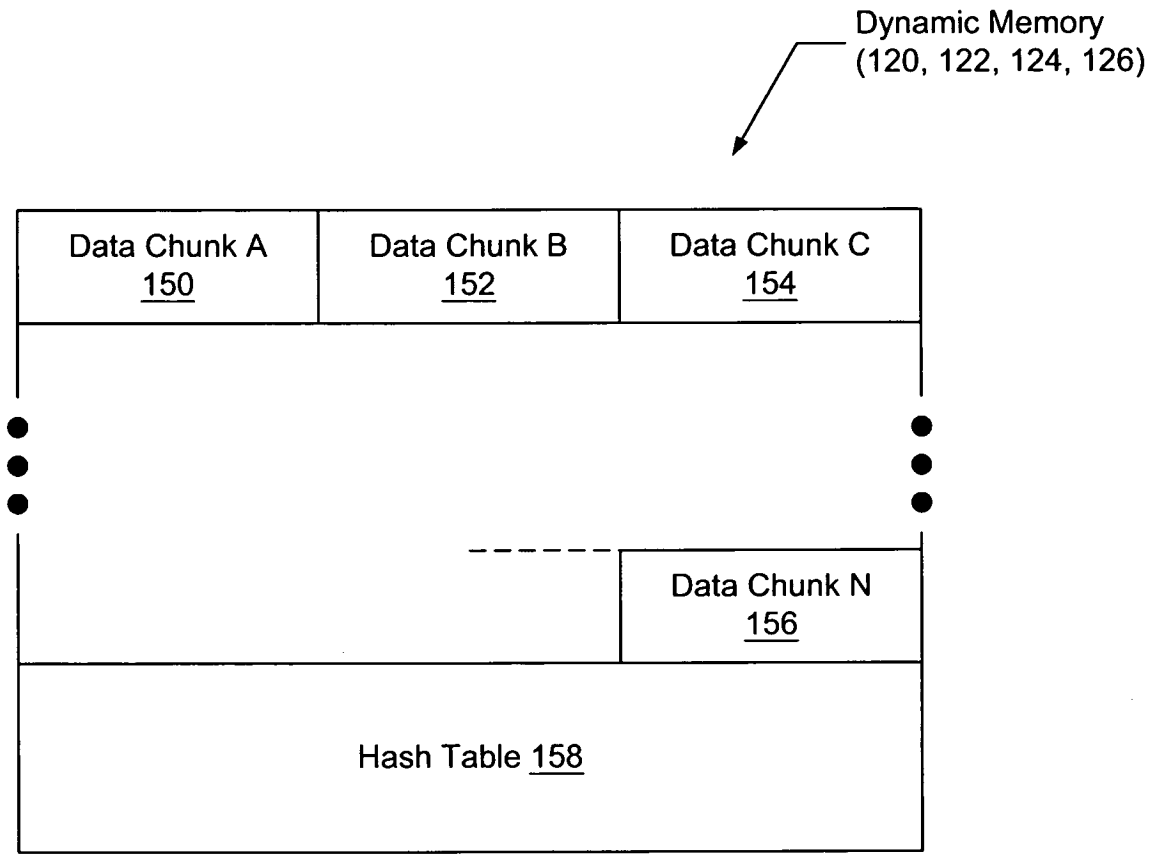
Dynamic Memory
(120, 122, 124, 126)
Data Chunk A
150
Data Chunk B
152
Data Chunk C
154
Data Chunk N
156
Hash Table 158

FIGURE 3

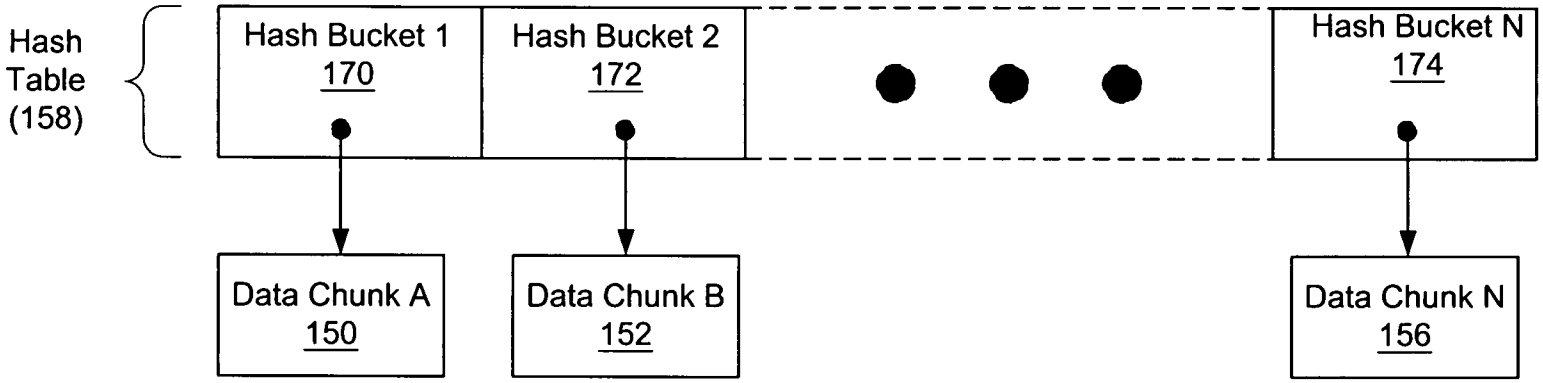
Hash
Table
(158)
Hash Bucket 1
170
Hash Bucket 2
172
Hash Bucket N
174
Data Chunk A
150
Data Chunk B
152
Data Chunk N
156

FIGURE 4

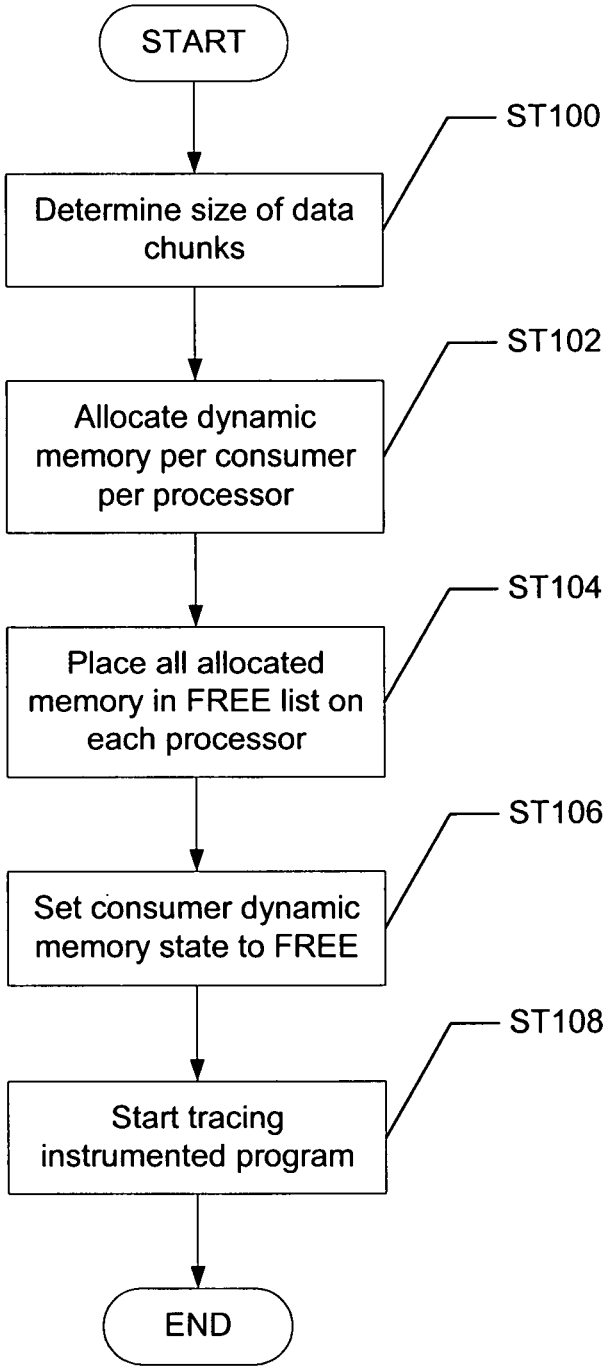
START
ST100
Determine size of data chunks
ST102
Allocate dynamic memory per consumer per processor
ST104
Place all allocated memory in FREE list on each processor
ST106
Set consumer dynamic memory state to FREE
ST108
Start tracing instrumented program
END

FIGURE 5

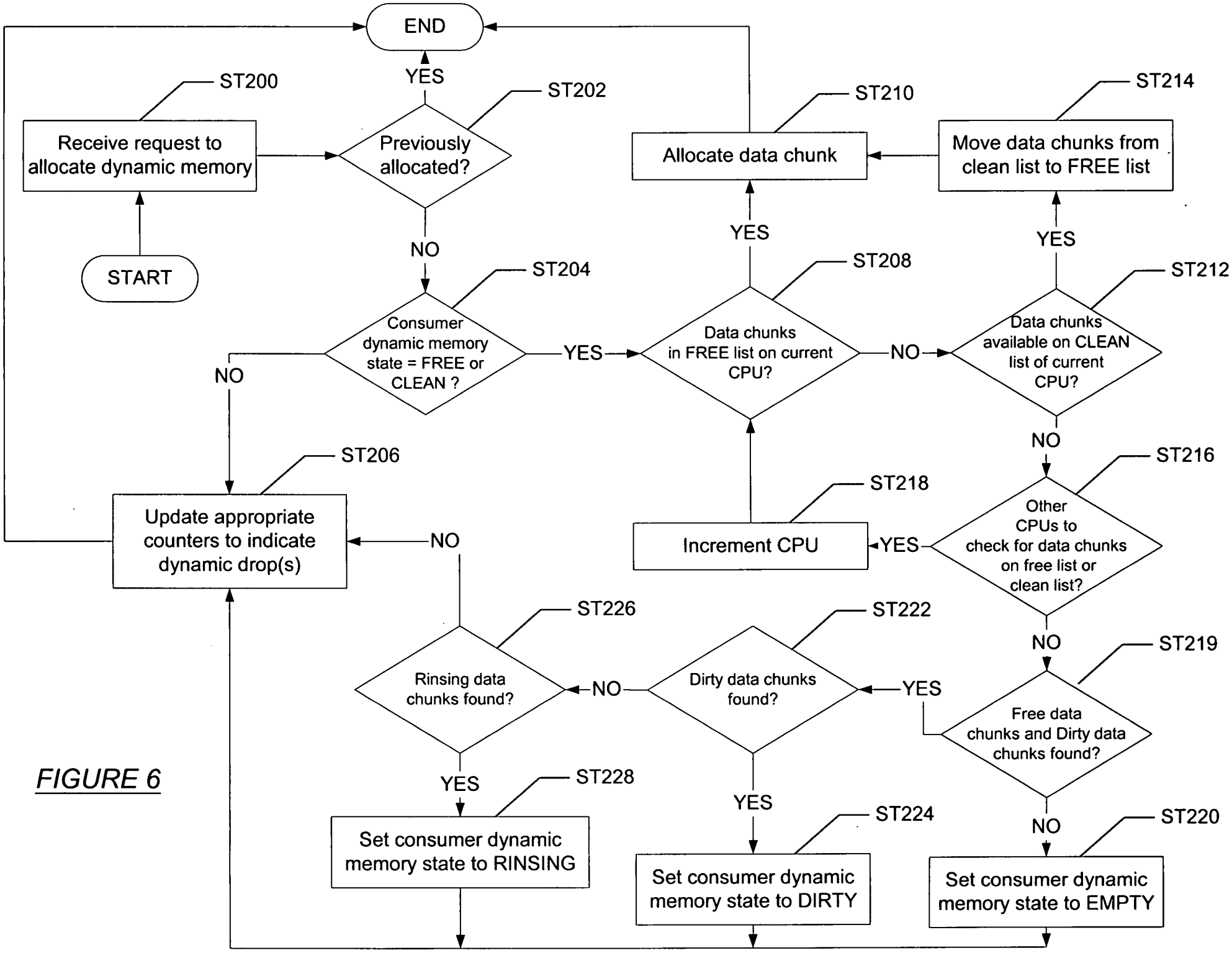
END
YES
ST200
Receive request to allocate dynamic memory
START
ST202
Previously allocated?
NO
ST204
Consumer dynamic memory state = FREE or CLEAN ?
NO
YES
ST206
Update appropriate counters to indicate dynamic drop(s)
ST208
Data chunks in FREE list on current CPU?
YES
ST210
Allocate data chunk
YES
ST212
Data chunks available on CLEAN list of current CPU?
NO
ST214
Move data chunks from clean list to FREE list
YES
ST216
Other CPUs to check for data chunks on free list or clean list?
NO
ST218
Increment CPU
YES
NO
ST219
Free data chunks and Dirty data chunks found?
YES
NO
ST222
Dirty data chunks found?
YES
NO
ST226
Rinsing data chunks found?
YES
ST220
Set consumer dynamic memory state to EMPTY
ST224
Set consumer dynamic memory state to DIRTY
ST228
Set consumer dynamic memory state to RINSING

FIGURE 6

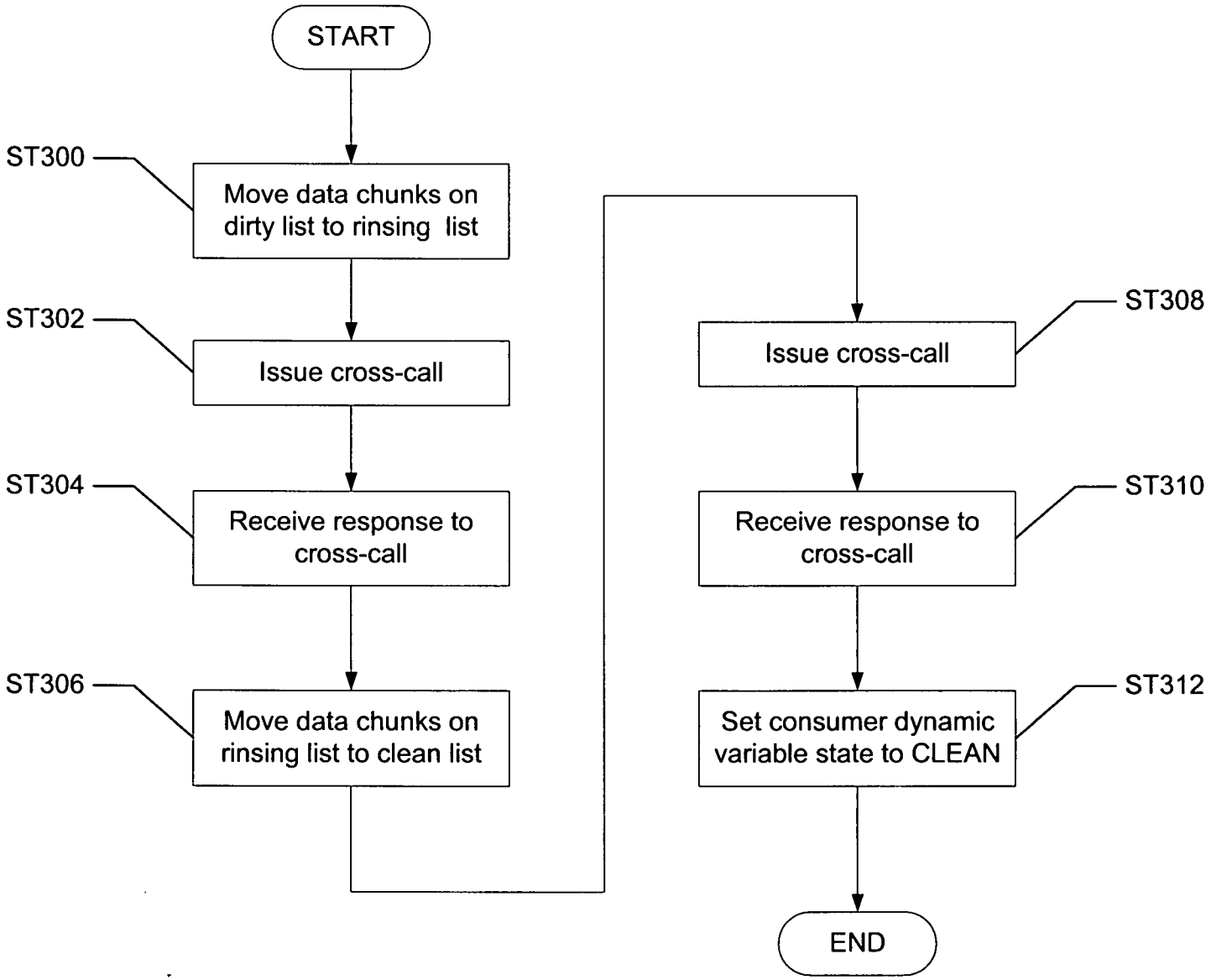
START
ST300
Move data chunks on dirty list to rinsing list
ST302
Issue cross-call
ST304
Receive response to cross-call
ST306
Move data chunks on rinsing list to clean list
ST308
Issue cross-call
ST310
Receive response to cross-call
ST312
Set consumer dynamic variable state to CLEAN
END

FIGURE 7